

WHAT IS CLAIMED IS:

1. A system for maintaining user-selected temperatures in multiple areas within a facility having a heating and cooling plant having conduits that circulate fluid for transferring or removing heat from the multiple areas within the facility, the system comprising:

area thermostats, each area thermostat sensing a temperature of a particular area within the facility and comparing the sensed temperature of said particular area to a user-selected temperature for said particular area; and

energy savings devices, each energy savings device being associated with a respective area thermostat, each energy saving device comprising:

a housing adapted to be secured to the conduits;

a first thermostat receiving a first pre-selected temperature setting from said respective area thermostat, said first pre-selected temperature being determined in accordance with said user-selected temperature, said first thermostat sensing the temperature of the fluid within one of the conduits and comparing the sensed temperature of the fluid to said first pre-selected temperature, the fluid attaining said first pre-selected temperature based on the operation of said facility heating and cooling plant; and

a fan contained within said housing, said fan being in electrical communication with said first thermostat and with said respective area thermostat and operational to transfer heat to, or remove heat from, said particular area of the facility to substantially maintain said area near said user-selected temperature for said particular area,

wherein said fan is energized when the fluid attains said first pre-selected temperature and is de-energized when said area of the facility attains said user-selected temperature for said particular area.

2. The system of claim 1, wherein said facility heating and cooling plant is operating in a heating mode, and said first pre-selected temperature settings of said energy savings devices are higher than said user-selected temperatures of said area thermostats.

3. The system of claim 2, wherein a highest user-selected temperature of any of said area thermostats correlates to a lowest of said first pre-selected temperature settings of said energy savings devices.

4. The system of claim 3, wherein successively lower user-selected temperatures of particular areas of said facility correlate to successively higher first pre-selected temperature settings of said energy savings devices, and

wherein a lowest user-selected temperature correlates to a highest first pre-selected temperature.

5. The system of claim 1, wherein said facility heating and cooling plant is operating in a cooling mode, and said first pre-selected temperature settings of said energy savings devices are lower than said user-selected temperatures of said area thermostats.

6. The system of claim 5, wherein a lowest user-selected temperature of any of said area thermostats correlates to a highest of said first pre-selected temperature settings of said energy savings devices.

7. The system of claim 6, wherein successively higher user-selected temperatures of particular areas of said facility correlate to successively lower first pre-selected temperature settings of said energy savings devices, and

wherein a highest user-selected temperature correlates to a lowest first pre-selected temperature.

8. A method of operating a system having energy savings devices to regulate the temperature within multiple areas under thermal control in a facility having a heating and cooling plant that has conduits that circulate fluid for transferring or removing heat from the multiple areas, each of the energy savings devices being associated with a particular area within the

facility wherein each particular area has a respective area thermostat set to a user-selected temperature, said method comprising:

energizing each of said energy savings devices when a temperature of the fluid crosses a threshold first pre-selected temperature setting in a first direction, the fluid attaining said first pre-selected temperature based on the operation of said facility heating and cooling plant, said threshold first pre-selected temperature setting of each energy savings device be obtained from said respective area thermostat in accordance with said user-selected temperature;

each energy savings device transferring thermal energy from the fluid to each particular area of the facility under thermal control;

regulating said particular area of the facility to said user-selected temperature for said particular area and de-energizing each said energy savings device once said user-selected temperature is attained in said particular area of the facility; and

thereafter, cycling each said energy savings device to substantially maintain said particular area of the facility at said second user-selected temperature until the temperature of the fluid within the conduits crosses said threshold first pre-selected temperature in a second direction opposite said first direction.

9. The method of claim 8, wherein said facility heating and cooling plant is operating in a heating mode, and said first pre-selected temperature settings of said energy savings devices are higher than said user-selected temperatures of said area thermostats.

10. The method of claim 9, wherein a highest user-selected temperature of any of said area thermostats correlates to a lowest of said first pre-selected temperature settings of said energy savings devices.

11. The method of claim 10, wherein successively lower user-selected temperatures of particular areas of said facility correlate to successively higher first pre-selected temperature settings of said energy savings devices, and

wherein a lowest user-selected temperature correlates to a highest first pre-selected temperature.

12. The method of claim 8, wherein said facility heating and cooling plant is operating in a cooling mode and said first pre-selected temperature settings of said energy savings devices are lower than said user-selected temperatures of said area thermostats.

13. The method of claim 12, wherein a lowest user-selected temperature of any of said area thermostats correlates to a highest of said first pre-selected temperature settings of said energy savings devices.

14. The method of claim 13, wherein successively higher user-selected temperatures of particular areas of said facility correlate to successively lower first pre-selected temperature settings of said energy savings devices, and

wherein a highest user-selected temperature correlates to a lowest first pre-selected temperature.